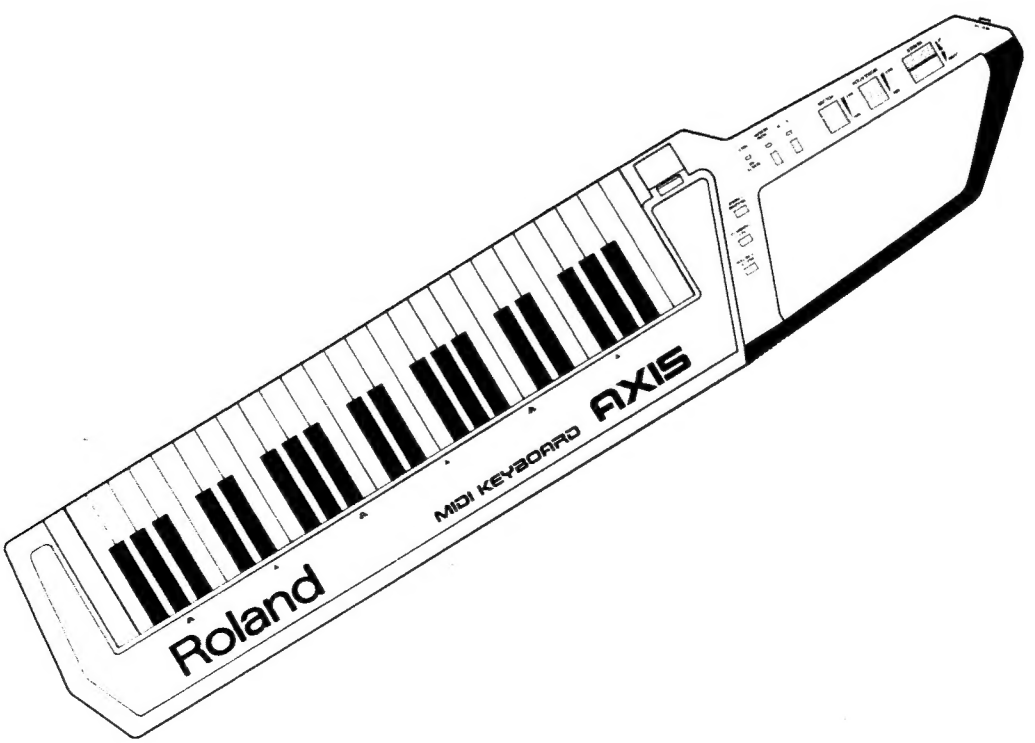
Roland

MIDI KEYBOARD

AXIS-1

Owner's Manual



RADIO AND TELEVISION INTERFERENCE

"**Warning** – This equipment has been verified to comply with the limits for a Class B computing device, pursuant to Subpart J, of Part 15, of FCC Rules.Operation with non-certified or non-verified equipment is likely to result in interference to radio and TV reception."

The equipment described in this manual generates and uses radio-frequency energy. If it is not installed and used properly, that is, in strict accordance with our instructions, it may cause interference with radio and television reception.

This equipment has been tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J, of Part 15, of FCC Rules. These rules are designed to provide reasonable protection against such a interference in a residential installation.
However, there is no guarantee that the interference to radio or television reception, which can be determined by turning the equipment does cause interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by the following measure:

- Disconnect other devices and their input/output cables one at a time. If the interference stops, it is caused by either the other device or its I/O cable.

These devices usually require Roland designated shielded I/O cables. For Roland devices, you can obtain the proper shielded cable from your dealer. For non Roland devices, contact the manufacturer or dealer for assistance.

If your equipment does cause interference to radio or television reception, you can try to correct the interference by using one or more of the following measures:

- Turn the TV or radio antenna until the interferences stops.
- Move the equipment to one side or the other of the TV or radio.
- Move the equipment farther away from the TV or radio.
- Plug the equipment into an outlet that is on a different circuit than the TV or radio. (That is, make certain the equipment and the radio or television set are on circuits controlled by different circuit breakers or fuses.)
- Consider installing a rooftop television antenna with coaxial cable lead-in between the antenna and TV.

If necessary, you should consult your dealer or an experienced radio/television technician for additional suggestions. You may find helpful the following booklet prepared by the Federal Communications Commission:

"How to Identify and Resolve Radio-TV Interference Problems"

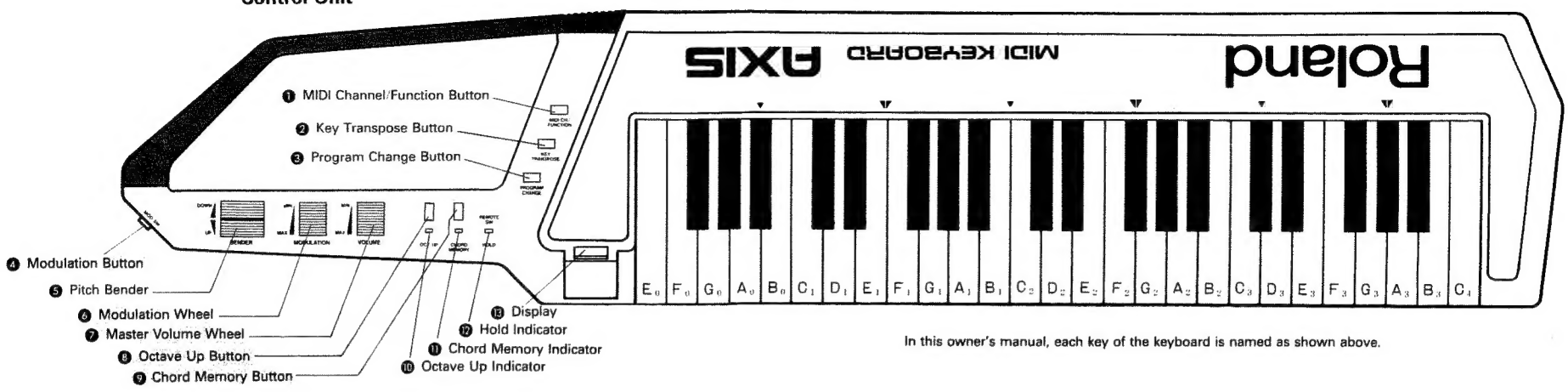
This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

Contents

To benefit all the advantages of the Axis, read the separate volume "MIDI", then this owner's manual.

1 Panel Description

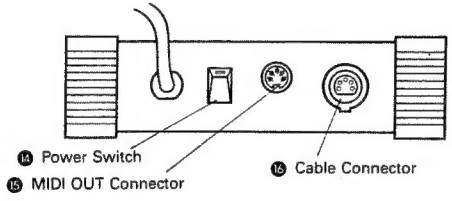
Control Unit

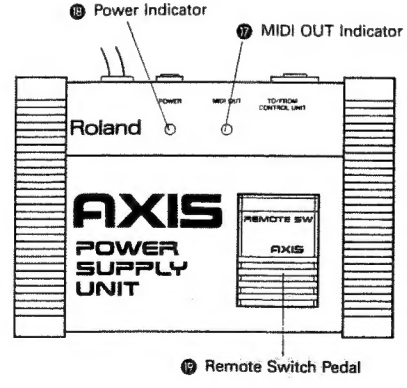


In this owner's manual, each key of the keyboard is named as shown above.

The Buttons ❹, ❽, ❾, the Wheels ❻, ❼ and the Pedal ⓱ have flexible functions.

Power Supply Unit





Axis is able to send various MIDI messages, but if the receiver cannot receive the message, the corresponding function is not obtained.

Important Notes

Power Supply

- Make sure that the line voltage system in your country meets the one shown in the name plate of the unit.
- Do not turn the units on before setting them up.
- This unit might not operate properly, if turned on immediately after turned off. If this happens, turn it off, then turn it on again in a few seconds.

Location

- Operating this unit near a neon or fluorescent lamp may cause noise interference. If so, change the angle or position of the Axis.
- Avoid using this unit in extreme heat or humidity or where it may be affected by dust or direct sunlight. Otherwise disformation or other trouble may occur.

Cleaning

- Use a soft cloth and clean only with a mild detergent.
- Do not use solvent such as paint thinner.

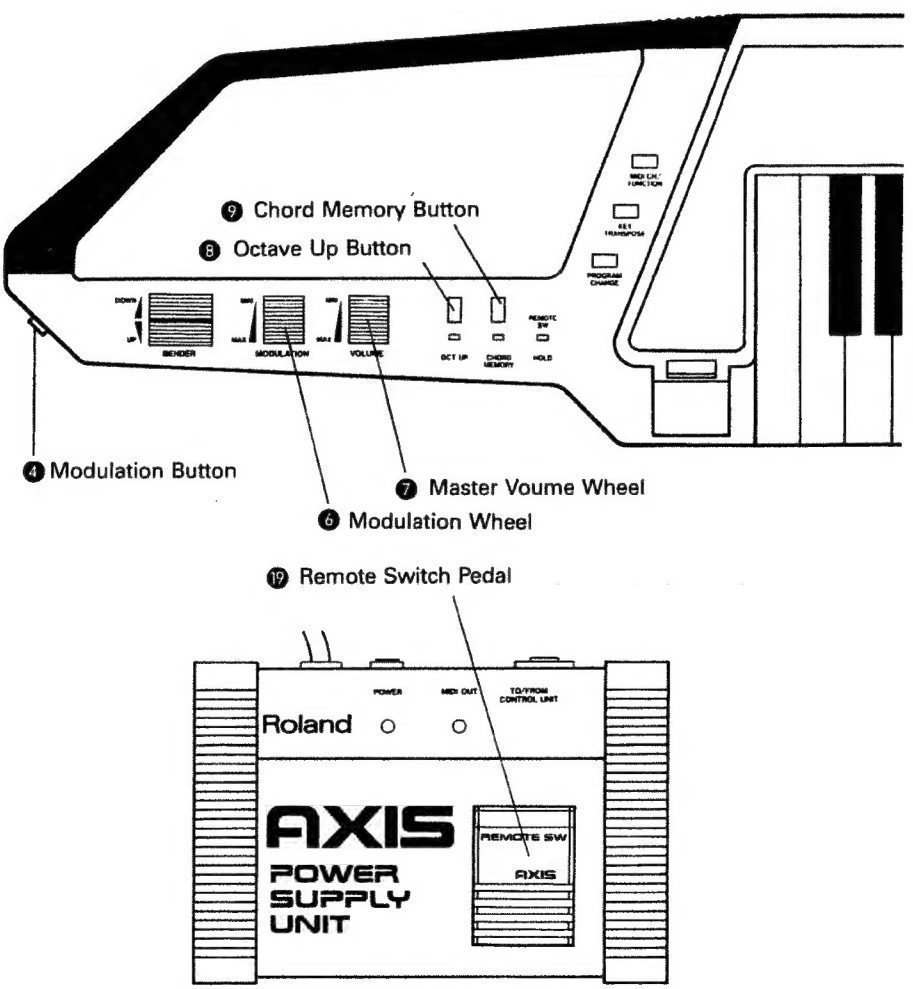
Outline of Axis

Axis is a keyboard designed to control MIDI sound module by sending various MIDI messages.
Actually, the Axis is ready to send almost all MIDI messages that are necessary to control the sound module connected to it. The necessary MIDI messages differ depending on the sound module used. If all the buttons and wheels that control those messages were provided on the Axis, they would be so many, causing complication. The Axis, however, has a unique feature that resolve this problem; some wheels and buttons are flexible for several functions. For instance, a certain wheel can behave as a modulation control, volume control or portamento time control, etc.

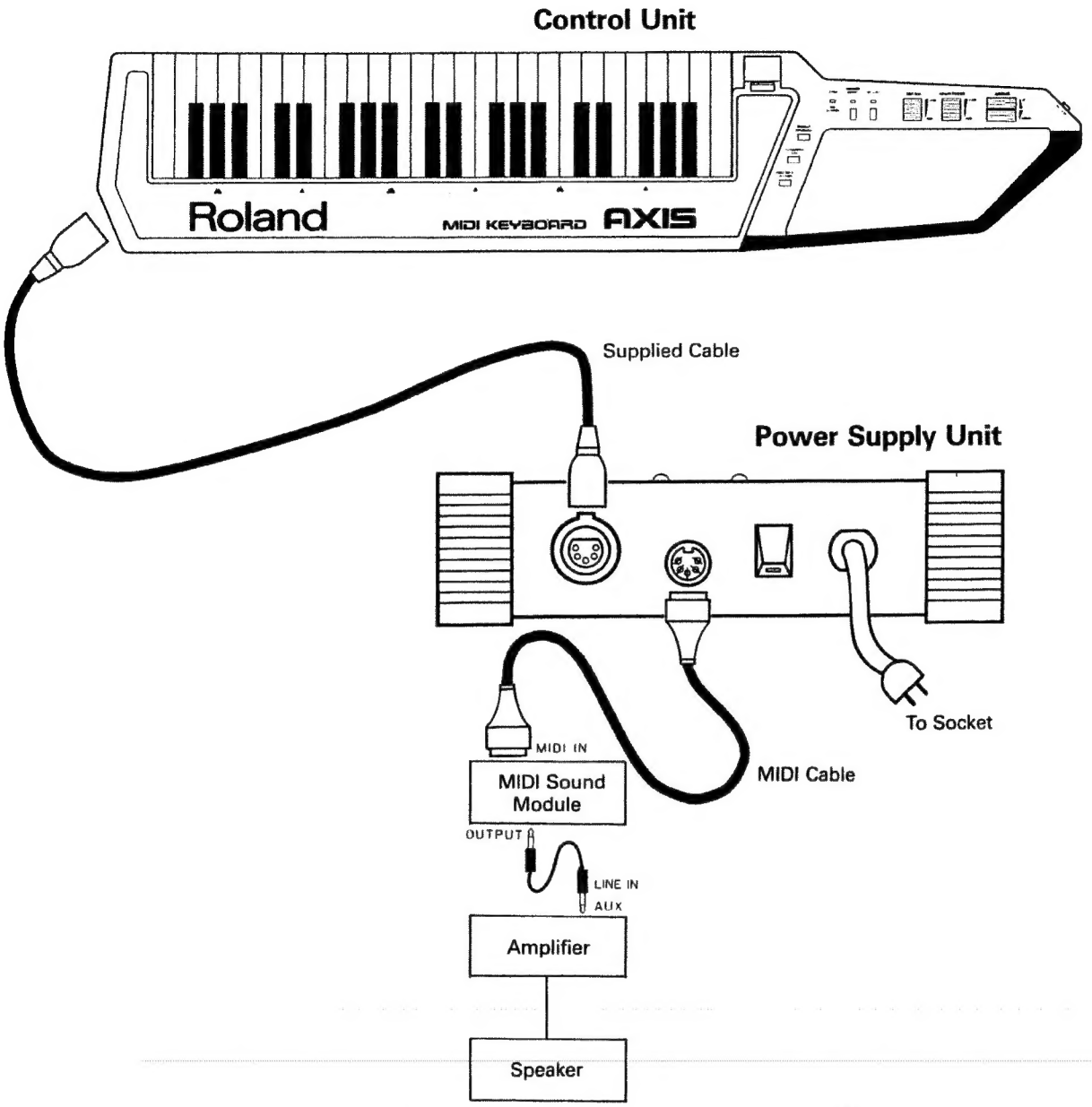
Each Key on the keyboard is assigned to do several jobs, and one of the jobs is to change the functions of the buttons and wheels. That is why the Axis has the minimum numbers of wheels and buttons for the maximum performance control effects.
Moreover, the function you have set is retained even if the Axis is turned off.

This 45-key, light-weighted keyboard can be easily slided around your neck, and it features the After Touch and Key Velocity sensitivities.

Flexible Wheels and Buttons



2 Connection



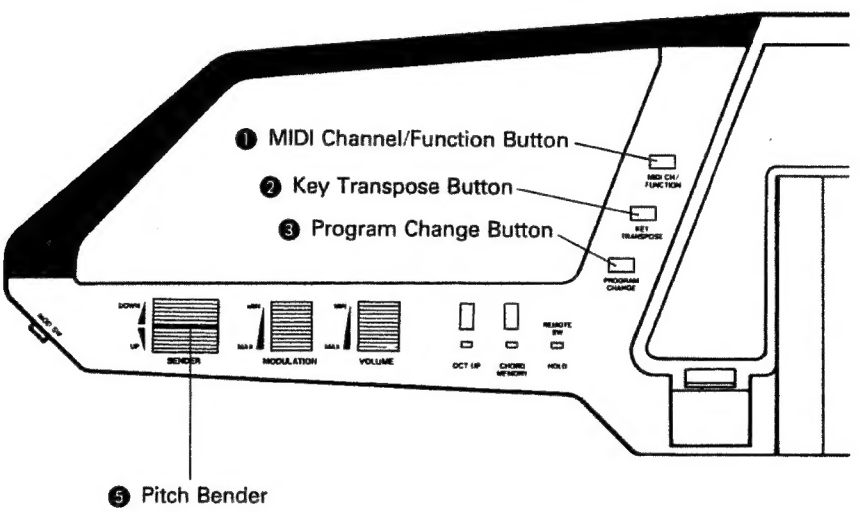
- For connecting the Control Unit and the Power Supply Unit, use the supplied connection cable. Also, for setting up MIDI device, use the supplied MIDI cable MSC-50.
- First make all connections, then turn the connected Sound Module on, and finally the Power Supply Unit.

3 Operation

If properly set up, the Axis can always be ready to be played. Some of the wheels and buttons on the Axis have several functions, and you can select any of the functions by a simple operation. But to avoid causing any confusion, first initialize the Axis, so that all the wheels and buttons choose the functions as marked on the body. (We call this **Standard Setting**.)

1 Using Wheels and Buttons which have fixed functions

The wheels and buttons that have fixed functions



a. MIDI Channel Setting

It is necessary to match the MIDI Channel number of the Axis and the external MIDI device. Use the MIDI Channel Button ❶ and a key on the keyboard to set a MIDI Channel of the Axis.

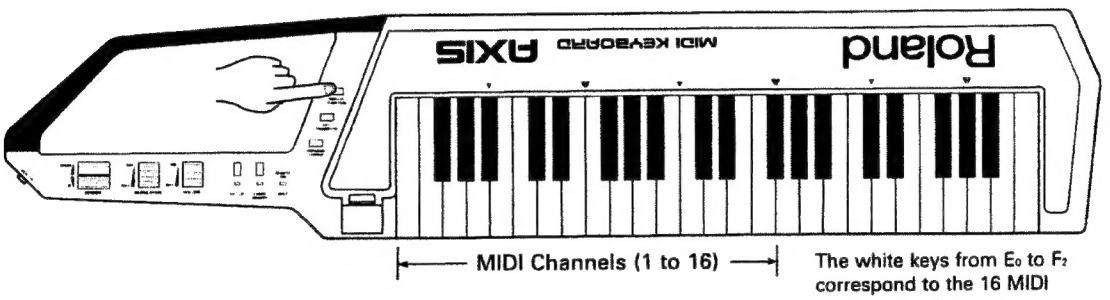
Operation

① Push the MIDI Channel Button ❶.

The Display ⓭ shows the current MIDI Channel number.

② As shown below, the Keys from E_0 to F_2 correspond to the MIDI Channel 1 to 16. Push the relevant key while holding the MIDI Channel Button ❶ down.

The MIDI Channel you have set is shown in the Display.



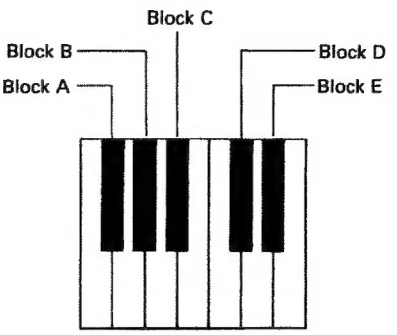
The white keys from E_0 to F_2 correspond to the 16 MIDI Channel numbers.

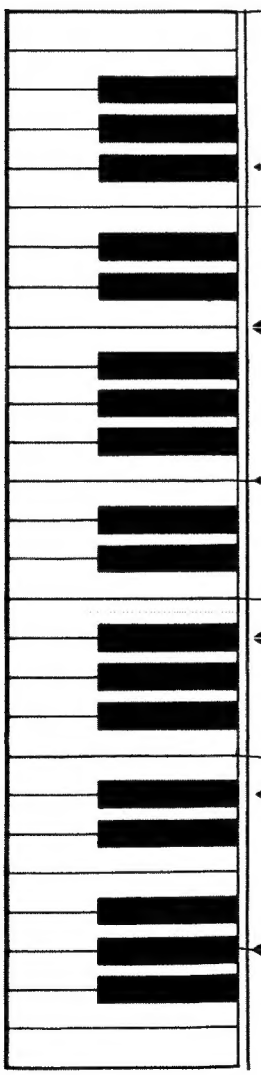
e.g.) To set MIDI Channel 5

While holding the MIDI Channel Button ❶, push the B_0 Key.

b. Setting a Program Change Number

Program Change is a MIDI message that can change tone colors in the external sound module.
The Axis can send 0 to 119 program change numbers.
To assign a number, select a block A, B, C, D or E with the black key, then push a white key from E_0 to G_3.



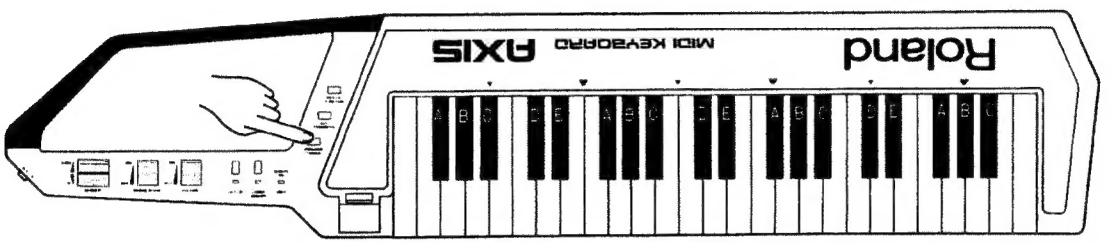


Key	Block A		Block B		Block C		Block D		Block E	
	Program Change	Display ●	Program Change	Display ●	Program Change	Display ●	Program Change	Display ●	Program Change	Display ●
E_0	0	11	24	41	48	71	72	21	96	51
F_0	1	12	25	42	49	72	73	22	97	52
G_0	2	13	26	43	50	73	74	23	98	53
A_0	3	14	27	44	51	74	75	24	99	54
B_0	4	15	28	45	52	75	76	25	100	55
C_1	5	16	29	46	53	76	77	26	101	56
D_1	6	17	30	47	54	77	78	27	102	57
E_1	7	18	31	48	55	78	79	28	103	58
F_1	8	21	32	51	56	81	80	31	104	61
G_1	9	22	33	52	57	82	81	32	105	62
A_1	10	23	34	53	58	83	82	33	106	63
B_1	11	24	35	54	59	84	83	34	107	64
C_2	12	25	36	55	60	85	84	35	108	65
D_2	13	26	37	56	61	86	85	36	109	66
E_2	14	27	38	57	62	87	86	37	110	67
F_2	15	28	39	58	63	88	87	38	111	68
G_2	16	31	40	61	64	11	88	41	112	71
A_2	17	32	41	62	65	12	89	42	113	72
B_2	18	33	42	63	66	13	90	43	114	73
C_3	19	34	43	64	67	14	91	44	115	74
D_3	20	35	44	65	68	15	92	45	116	75
E_3	21	36	45	66	69	16	93	46	117	76
F_3	22	37	46	67	70	17	94	47	118	77
G_3	23	38	47	68	71	18	95	48	119	78

You can even hear the corresponding tone color while changing the program change numbers. (This is explained in "2) Setting a Program Change Number (2)" on Page 12)

1) Setting a Program Change Number ‹1›

① While holding the Program Change Button ❸ down, select a Block you like by using a black key.

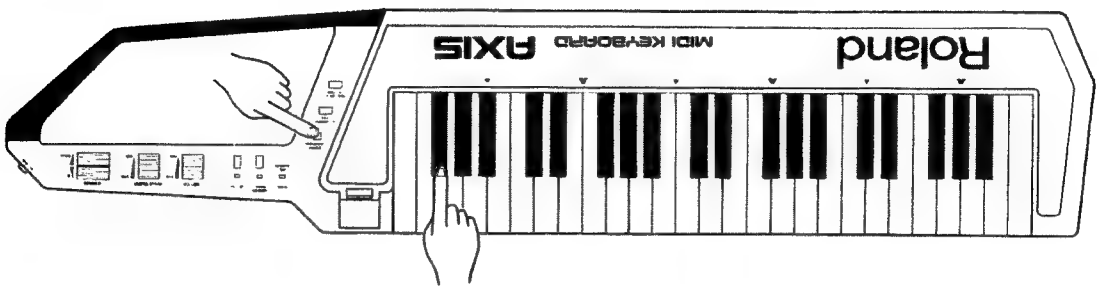


② While still holding the Program Change Button ❸, push the white key that corresponds to the program change number you want.

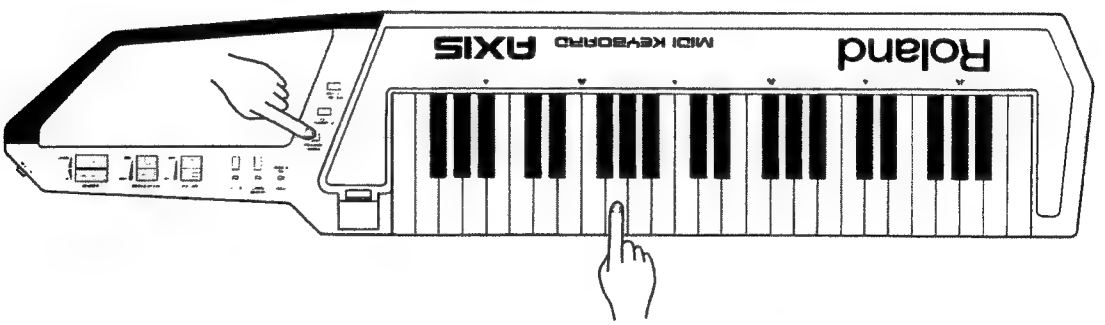
The program change number you have set is shown in the Display. If the program change number you wish to set is within the same block of the current one, skip the step ①.

e.g.) Setting program change number 9

① Program change number 9 is in the Block A. So push the F♯ key while holding the Program Change Button ❸.



② Program change number 9 corresponds to the G key. So, push the G key while still holding the Program Change Button ❸.



The Display ⓭ shows "22"

The number shown in the Display does not correspond to the actual program change number. (See page 7 of "MIDI") That is, you need to translate each number with the aid of the table on page 9.

It may be a good idea to collect your favourite tone colors in the same block in the sequence you like. In this way, you can call those tone colors without changing the Blocks.

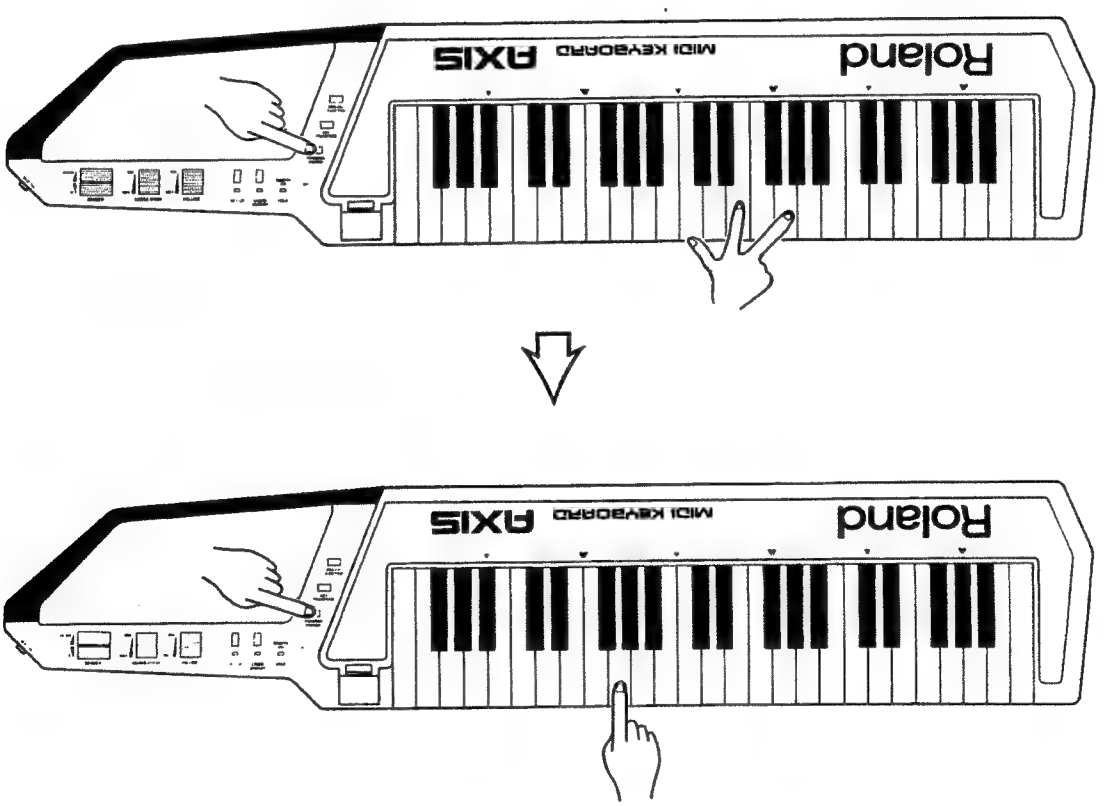
2) Setting Program Change Number ‹2›

In this method, as you change the program change number, you can hear the corresponding tone color.

Operation

① While playing a key (or chord), hold down the Program Change Button ❸, then release the key (or keys).

② While still holding the Program Change Button ❸, push a relevant key for the program change number you want. When you push the key, the corresponding tone color will be heard in the pitch of the key you played in the step ①.



c. Key Transpose

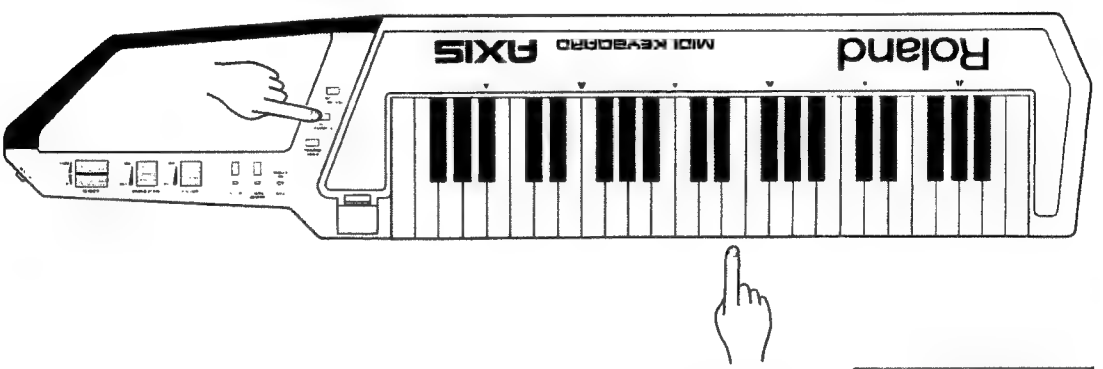
The Axis allows transposition within 2 octaves upper and an octave down in semitone steps.

Operation

① Push the Key Transpose Button ❷.

The Display shows the current condition (C_2 Key).

② While still holding the Key Transpose Button ❷, press the key you wish to transpose to from C_2 key.



If the Display shows the abbreviation* of the new key, the transposition is done.

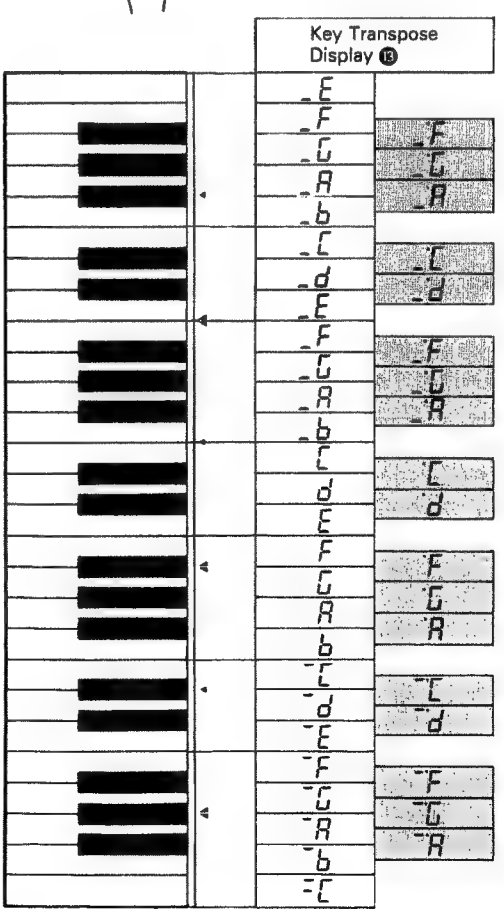
* C_2 to B_2 : C ~ b

C_1 to B_1 : _C ~ _b

C_3 to B_3 : ¯C ~ ¯b

C_4 : =C

: ˙ e.g. $C_2^{\#}$: C˙



e.g.) To transpose an octave up from C_2

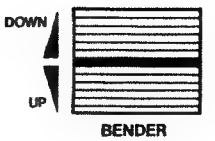
① While holding the Key Transpose Button ❷ down, push the C_3 key.

When the Display shows [C] , transposition is completed.

• Play a chord, and without releasing the keys, press the Transpose Button ❷. Then release the keys, without releasing the button ❷, and play with one finger. Now, the chord transposed according to the key you are playing will be heard. In this way, you can enjoy chord playing using only one finger.

To return to the normal playing condition, release the button ❷. At this stage, however, the transposition, is not cancelled, that is, the Axis is transposed to the key pressed last.

d. Pitch Bender ❺



The Up and Down positions give the pitch bend effect of two extremes, highest and lowest,

Normally, the maximum effect of the pitch bend is adjusted by the sound module.

e. Other Functions

1) Key Velocity (Dynamics)

The Axis can send Key Velocity message depending on how hard you attack the key.

The sensitivity of the Key Velocity is adjusted by the connected sound module.

2) After Touch

The Axis sends After Touch message depending on how hard you press the key after playing a key in a normal manner.

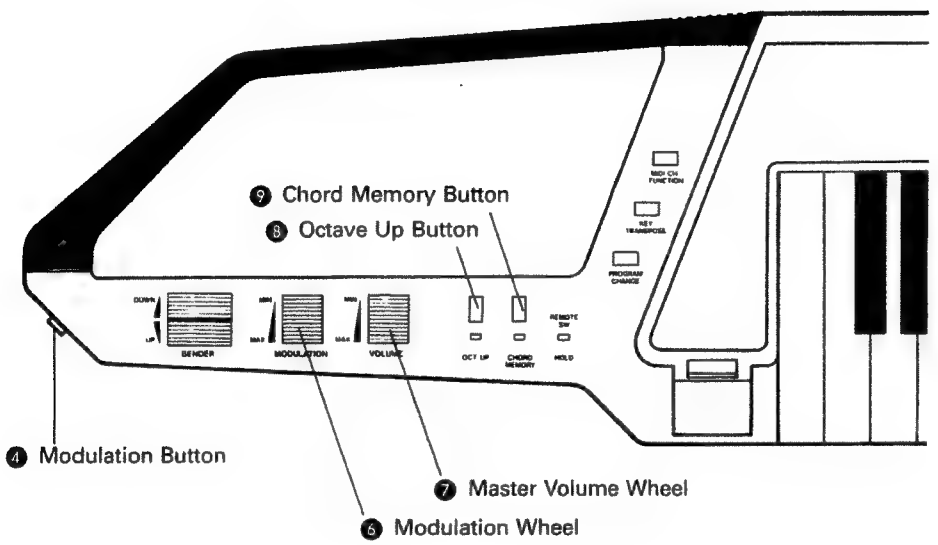
The sensitivity of the After Touch is adjusted by the connected sound module.

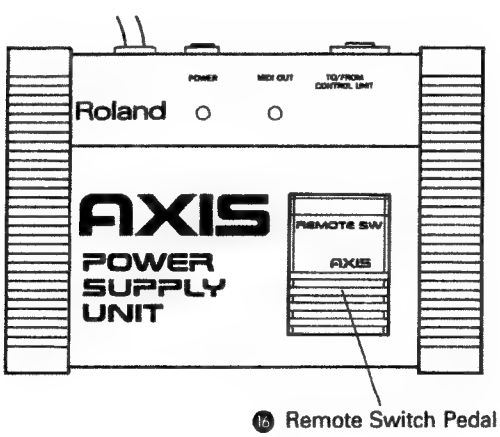
3) MIDI Out Indicator

This indicator flashes when the Axis is properly set up, showing that MIDI message is being sent.

2 Using the Wheels and Buttons which have flexible functions.

Each of the wheels and buttons shown below has several functions which you can choose depending what you want from the Axis.





Before experimenting what the functions each wheel and button has, let's initialize the Axis, so that those wheels and buttons will be set to what we call **Standard Setting**.

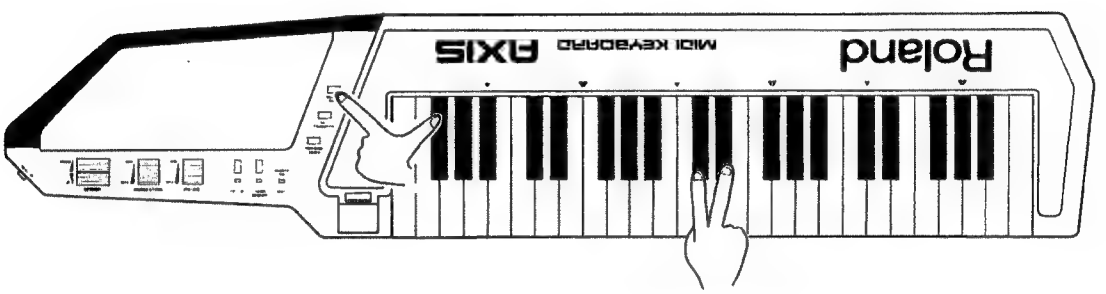
‹Note›
It is not possible to set more than one button or wheel to the same functions.

a. How to Initialize

① Turn the Axis on, then check if the Power Indicator ⑱ lights, and the MIDI Out Indicator ⑰ flashes.

② While holding the Function Button ❶ down, press the F♮, C♯ and D♯ keys at the same time.

The Display will respond with [CL], then [- -] when you release both your hands. This means that initialization is completed.



Now, the Axis is initialized, and each button and wheel has the Standard Setting. (See the following Standard Setting or the appendix table 1.) The Standard Setting is not cancelled even after the Axis is turned off.

*** When the Display shows [Er], the Standard Setting is erased for some reason. If this happens, be sure to initialize the unit.**

*** If [Er] is often indicated, contact your local Roland dealer, as the battery replacement may be required. The battery is supposed to last about 5 years, but the first battery replacement may be required before 5 years.**

Standard Setting

1) Modulation Wheel ❻

Rotating this toward MAX will deepen the modulation.

The maximum effect of the modulation can be adjusted by the connected sound module.

2) Master Volume Wheel ❼

Rotating this toward MAX will increase the volume.

3) Modulation Button ❹.

While this button is being held down, the modulation is turned on.

The maximum effect of the modulation can be adjusted by the connected sound module.

4) Octave Up Button ❽

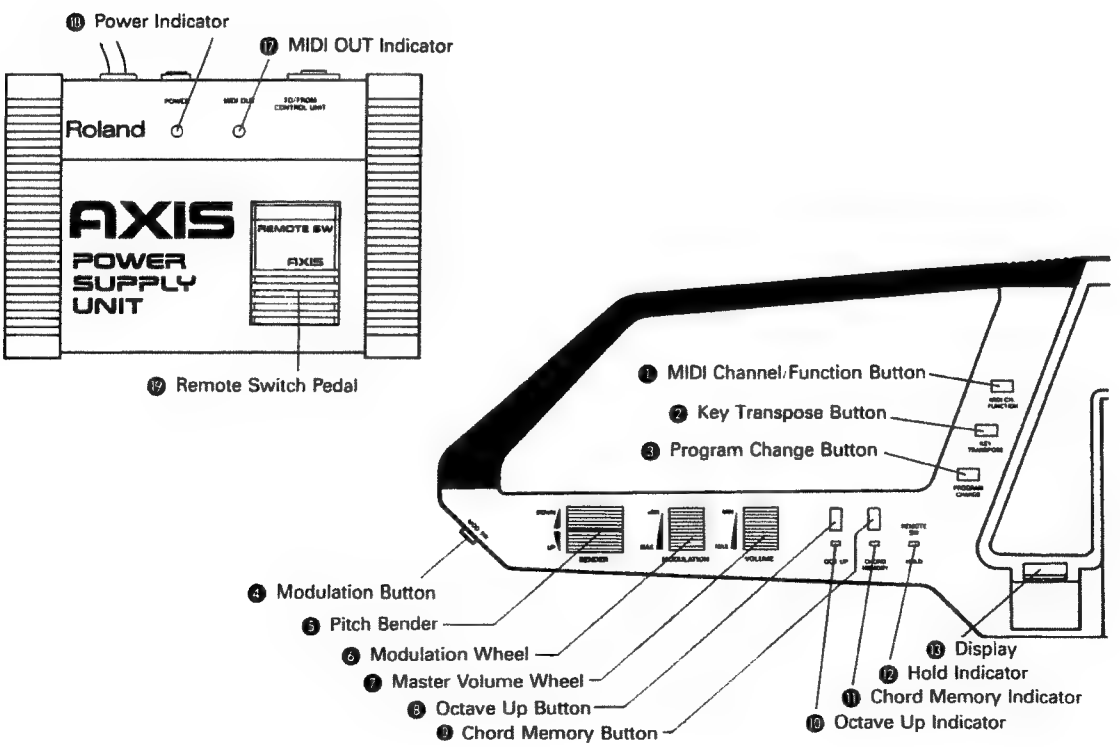
Press this button to turn the Octave Up function on, and press it again to turn it off. When it is on, the Octave Up Indicator ❿ lights up and an octave is transposed up.

5) Chord Memory Button ❾

This button can be used to record a chord data (Page 19) and enjoy chord playing by using a single key. Each time you press this button, it is alternately turned on and off. When on, the Chord Memory Indicator ⓫ lights up and the Display shows "cd".

6) Remote Switch Pedal (Hold Pedal) ⓳

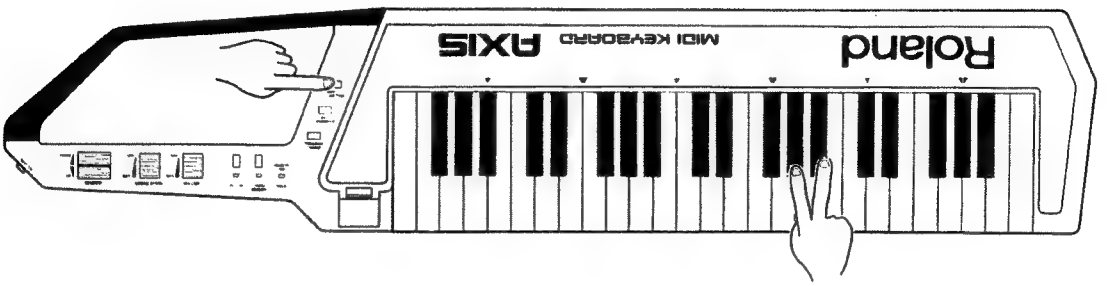
While holding this pedal down, the Hold Indicator ⓬ is lighted, the Hold function turned on.



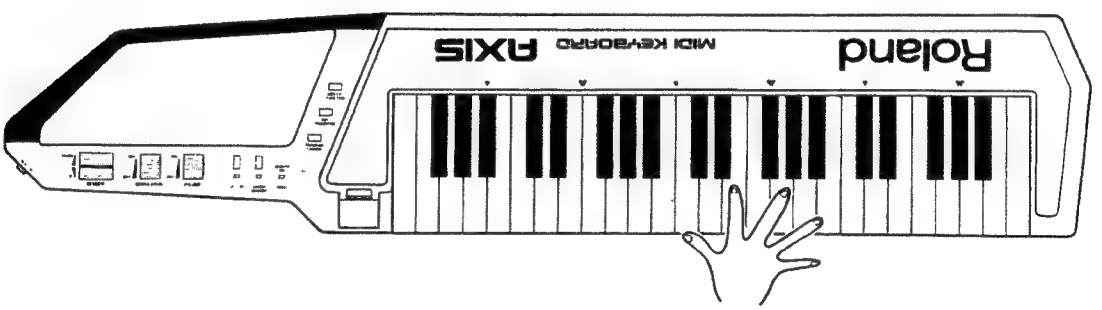
How to record a chord data

① While holding the Function Button ❶, press the G♯ and A♯ at the same time.

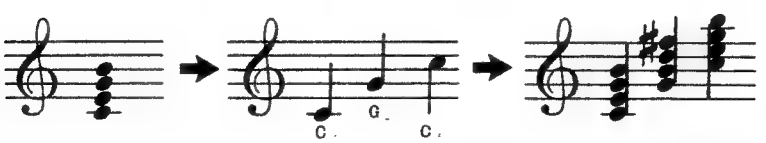
The Display shows flashing [cd], showing that the Axis is ready to accept chord data.



② Play the chord to be recorded, and release the keys, and recording is done.



*** Relation between the recorded chord and actual chords you hear**



Recorded Chord | What you play | Actual Chords you hear

When C_2 Key is played, the actual chord you hear is exactly in the same pitch as the recorded one.

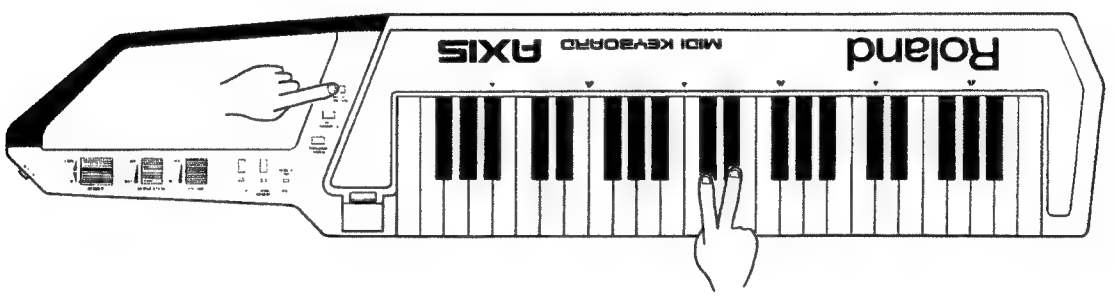
*** The recorded chord data is retained even after the Axis is turned off, but will be cleared by initialization.**

b. Play Mode and Write Mode

When you play the Axis or to initialize it, it should be in the Play mode. But to change the functions of the flexible wheels and buttons, the Axis should be turned to the Write mode.

How to turn the Axis from the Play to Write mode

While holding the Function Button ❶ down, press the C♯ and D♯ keys at the same time.



The Display will respond with flashing [UU], showing that it is now in the Write mode. Take the exactly same operation to return to the Play mode.

Flashing [UU] always means that the Axis is in the Write mode.

c. Changing the functions of wheels

By using the MIDI Control Change numbers from 0 to 31, the two flexible wheels can be set to have the functions you like.

*** Control Change messages include performance control messages such as Vibrato, Hold, Portamento, etc., except for the key message. Each function of the wheel or button has corresponding control change number which can be used to set the function. (wheel: 0 to 31, Button: 64 to 95.)**

*** Some MIDI devices used as sound modules of the Axis have different assignments of the control change numbers. Refer to the owner's manual of each device. And if you have any question about it, contact the manufacturer or the distributor.**

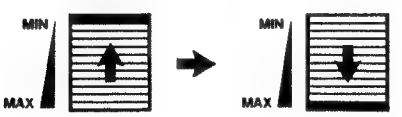
At the moment, the following control change numbers are used to change the functions of the two wheels.

1 : Modulation
2 : Breath Controller
4 : Foot Controller
5 : Portament
6 : Data Entry
7 : Total Volume
31: Pitch Bender Sensitivity

Operation

① Turn the Axis to the Write mode as explained on page 20.

② Rotate the relevant wheel to MIN, then to MAX.

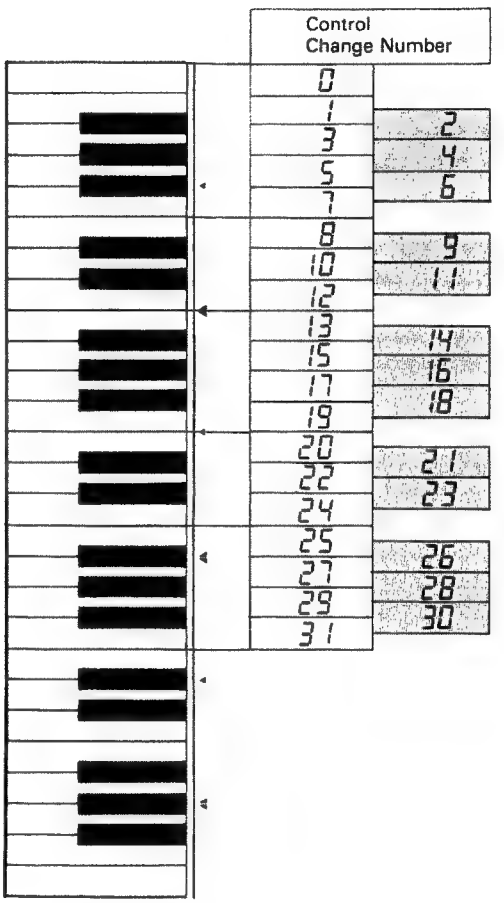


Rotate to MIN Rotate to MAX

The Display shows the current control change number.

③ Push the key which corresponds to the desired control change number.

The Display shows the new control change number.



④ Rotate the wheel to the MIN.

The Display will return to the flashing 00

⑤ Return the Axis to the Play mode. (If you wish to continue to operate in the Write mode, remain in the Write mode.)

*** In the Standard Setting, the wheel ❻ is set to Modulation (Control change number 1), and the wheel ❼ to the Volume (Control change number 7).**

d. Changing the functions of Buttons

The three buttons on the Axis can have different functions as follows by using corresponding keys.

- **Functions Selected by MIDI Control Change numbers (e.g. Hold and Portamento)**
- **Modulation**
- **Octave UP**
- **Octave Down**
- **Chord Memory**
- **Program Increment**
- **Program Decrement**
- **Patch Chain**

Any of the above functions can be assigned by using a key. The Display shows the control change number assigned, and the abbreviation of the other function. This, however, is seen only while the button is held down, and releasing the button will change to Write mode display.

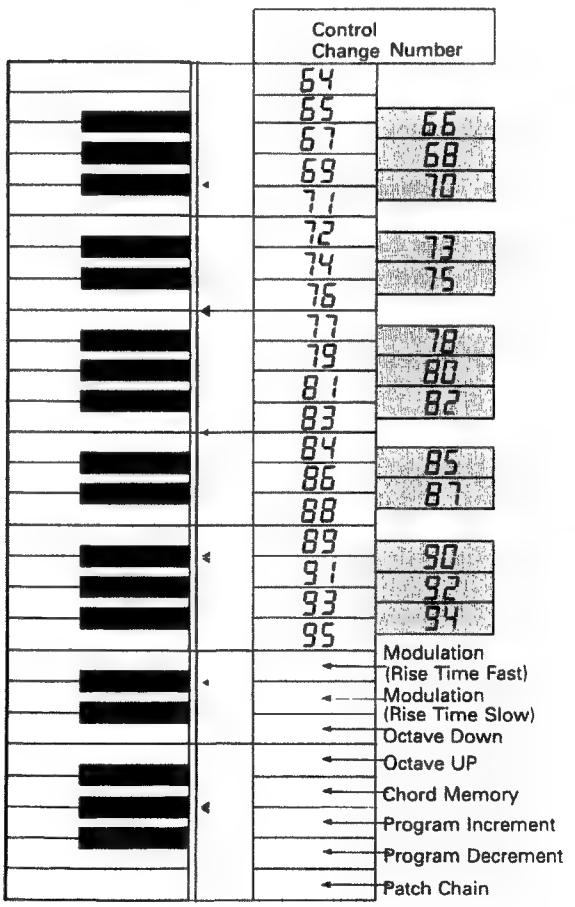
Operation

① Change to the Write mode as explained in "b. Play Mode and Write Mode" on page 20.

② Push the relevant button.

The Display shows the function currently selected, either in number or abbreviation.

③ While still holding the button down, push the key corresponding to the desired function.



The Display shows the new function.

④ Return the Axis to the Play mode.

1) Control Change Numbers (64 to 95)

At the moment, the following Control Change numbers are available.

64 : Hold or Damper Pedal
65 : Portamento
66 : Sostenuto
67 : Soft Pedal

2) Modulation (C_3, D_3)

When this function is assigned to one of the flexible buttons, that button can select fast or slow rise time of the wheel's modulation effect.

The Display will show the selected rise time, fast [FS], or slow [SL].

3) Octave Up (F_3)/Down (E_3)

When this function is assigned to one of the flexible buttons, that button can select transpositions either one octave upper or down.

The display [ou] means Octave Up and [od] means Octave down.

4) Chord Memory (G_3)

When this function is assigned to one of the flexible buttons, that button can turn on or off the Chord memory function. (See page 19 for the details of Chord Memory function.)

When the Chord Memory is turned on, the Display will show [cd].

5) Increment (A_3)/Decrement (B_3)

When this function is assigned to one of the flexible buttons, that button can increment or decrement the current program change number.

The Display will show Program Increment [P,] or Decrement [Pd].

6) Patch Chain (C_4)

When this function is assigned to one of the flexible buttons, that button can turn on the Patch Chain function. The Patch Chain enables you to chain up to 10 different patch programs in sequence and recall them in the same sequence.

The Display shows [P0] first, and as you chain the patch program, changes like [P1] ~ [P9].

Path Chain Programming

Each patch program in the Patch Chain can retain the following four messages. The program change number, however, can be left free for you to set the number you like later during live performance.

Program Change
MIDI Channel
MIDI Mode (OMNI ON/OFF, Poly/Mono)
Key Transpose

Up to 10 patches from P0 to P9 can be chained in the Patch Chain.

Operation

Assign any of the flexible buttons to the Patch Chain Button, as described in "d. Changing the functions of Button."

① Turn the Axis to the Write mode.

② Set the Program Change, MIDI Channel, MIDI Mode, Key Transpose to your taste.

③ Push the Patch Chain Button.

The Display shows the Patch Chain Program number 0.

④ While still holding the Patch Chain Button, push the Program Change Button ❸.

Now, the setting you have made in step ② will be written in the patch chain program number 0 shown in the Display.

⑤ Release the program Change Button ❸, and the patch chain program number 1 will appear in the Display, showing that it is ready to accept the messages.

⑥ Repeat the steps ② to ⑤ as many times as necessary.

Up to 10 patch programs (P0 to P9) can be written into the Patch Chain.

⑦ Return the Axis to the Play mode.

* The Axis can retain the Patch Chain data even if switched off. Initialization, however, clears the entire data.

Not to write Program Change message to Patch Chain:

Instead of writing Program Change number in the step ②, push any of the A_3, B_3 or C_4.

Calling the Patch Chain

Operation

① Press the Patch Chain Button, and Patch Chain Program 0 is called.

The Display shows P0.

② Release the Patch Chain Button.

The Display shows the program change number written in the Patch Chain program number 0.

③ Press the Patch Chain Button, and the next Patch Chain Program P1 will be called. Then keep on calling the rest of the Patch Chain. If you press the Patch Chain Button after the last patch chain program is called, the P0 will be recalled.

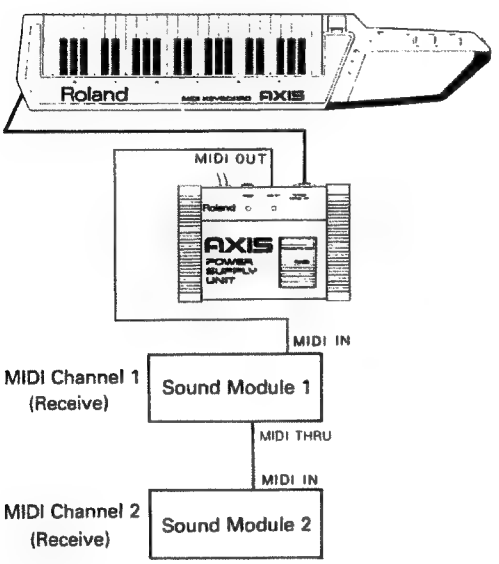
*** To call Patch Chain Program number 0 in the middle of calling Patch Chain, press the Program Change Button ❸ then the Patch Chain Button.**

*** If there is no data written in the patch chain program, the Display will show PE (Program End) instead of the Patch Chain Program number.**

Application of Patch Chain

Patch Chain is the function that changes Program Change numbers, MIDI Channels, MIDI modes, and Key Transpose modes, therefore can be effectively used as follows.

MIDI Channel Selector



When using more than one MIDI Sound Module, assign P0 to MIDI channel 1 and P1 to channel 2. Then, pressing the Patch Chain Button alternately selects channel 1 and 2.

MIDI Mode Selector

Patch Chain function can be used for selecting Poly/Mono, and OMNI ON/OFF. (See page 29.)

Programmable Key Transposer

This can be effectively used for the music that includes transition, or octave transposition along with tone color change.

Editing a patch program in the Patch Chain

Operation

① Turn the Axis to the Write mode.

② Set the Program Change number, MIDI Channel, MIDI Mode and Key Transpose as you desire.

③ While holding the Patch Chain Button, call the Patch Program number where you wish to write the above setting, by using the F♯ or G♯ key.

Each time G♯ key is pressed, one Patch Chain Program number is advance. And pressing the F♯ key backs up one number.

④ While still holding the Patch Chain Button, push the Program Change Button ❸.

⑤ Return the Axis to the Play mode.

Adding a Patch program to Patch Chain

Operation

① Turn the Axis to the Write mode.

② Set the Program Change number, MIDI Channel, MIDI Mode and Key Transpose as you desire.

③ Go to the Chain Program number following the entire existing Patch Chain data, by pressing the G♯ Key while holding the Patch Chain Button.

④ While still holding the Patch Chain Button, push the Program Change Button ❸.

⑤ Repeat the steps ② to ④ as many times as necessary.

⑥ Return the Axis to the Play mode.

Deleting from a patch program to the end of the Patch Chain

Operation

① Turn the Axis to the Write mode.

② While holding the Patch Chain Button, go to the patch chain program number from which to the end to be deleted (e.g. P6), by using the F♮ Key or G♮ key.

③ Press the A♮ key, while still holding the Patch Chain Button.

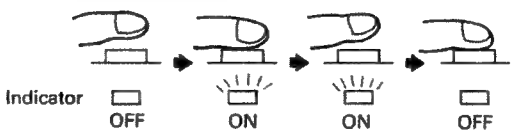
④ Return the Axis to the Play mode.

*** The A♮ Key always means the end of the Patch Chain data.**

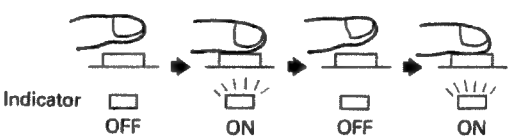
7) Latch/Unlatch of the buttons

Unlatch or latch can be selected for the Octave Up Button ❽, Chord Memory Button ❾ and Remote Switch Pedal ⓳.

Latch : Each time you press the button, On and Off are alternately selected.



Unlatch : Just while the button is held down, it is on.



Right after the functions of a button are changed, the button is automatically set to unlatch.

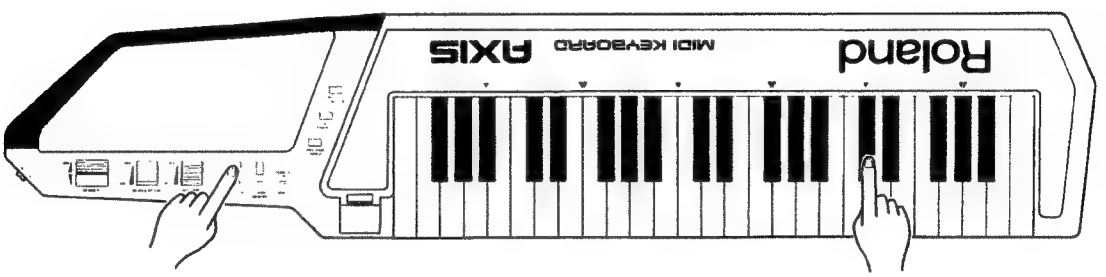
How to set a button to latch

① Turn the Axis to the Write mode.

② Push the relevant button.

The indicator above the button flashes. (If the button has already been set to latch, the indicator remains lighted.)

③ While still holding the button, press the C♯ key.



The indicator stops flashing and lights steadily, showing that it is now a latch button.

④ Return the Axis to the Play mode.

To change to unlatch button, you need to set the function of the button once again.

*** The Modulation Button ❹ is a flexible button, but cannot be set to latch.**

*** When a button selects any of the following functions, it cannot be set to the latch button.**

- **Increment**
- **Decrement**
- **Patch Chain**

3 Functions

Each of the following functions can be turned on or off. And also, you can get the Display show the current condition.

	Key for Display	Key for ON/OFF
After Touch	G♯3	A3
Touch Hold	F♯3	G3
POLY/MONO	D♯3	E3
OMNI ON/OFF	C♯3	D3

Tune Request	C4

a. How to get the Display show the current condition:

While holding the Function Button ❶ down, push the relevant Key for Display. (See the table above.)

While the Function Button❶ is held down, the Display shows the current on/off condition of the function.

b. How to turn on or off the function

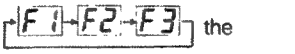
While holding the Function Button ❶ down, push the Key for ON/OFF. (See the table above.)

While the Function Button ❶ is held down, the Display shows the new On/Off condition.

c. Explanation on the Functions

1) After Touch

The After Touch message of the Axis can be sent by the Control Change number 1 or 3, as well as by the MIDI After Touch.

The Display will change like  the function is changed.

F 1 (Function 1)
After Touch message is sent by Control Change number 1.

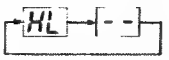
F2 (Function 2)
After Touch message is sent by MIDI After Touch.

F3 (Function 3)
After Touch message is sent by Control Change number 3.

*** Even if the sound module you use cannot receive After Touch message, in other words, if it does not feature after touch function (such as Juno-106 or MKS-30), set the Function 1, and it will take on the modulation by the After Touch message of the Axis.**

2) Touch Hold

This is the function that retains the amount of the after touch obtained when the key is pushed most strongly. (This function is off in the Standard Setting.)

The Display changes like  , as the function is changed.

(Hold) Touch Hold On

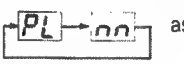
(Normal) Touch Hold Off

*** The Touch Hold function is especially useful for the sound with a long release time, but if you push the key too hard, After Touch will affect the sound right from the beginning of a note, therefore the created sound will be unnatural.**

3) POLY/MONO

The Axis can send this message that determines whether the connected sound module is played in polyphonic or monophonic. (In the Standard Setting, this is set to POLY.)

*** If the sound module cannot receive this message, the message is ignored.**

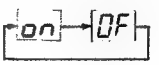
The Display will act like  as the function is changed.

(POLY) Polyphonic

(Mono) Monophonic

4) OMNI ON/OFF

OMNI On/Off is the messages that determines whether the MIDI messages are received on all Channels or on the specific Channel. The Axis can send this message to the sound module.

The Display will act like  as the function is changed.

(ON) OMNI ON

(OFF) OMNI OFF

*** Even if the sound module is set to the OMNI ON mode, it may not receive messages (such as OMNI ON/OFF, Poly/Mono etc.) on the channel other than that of its own.**

5) Tune Request

This is the message that autotunes the sound module (receiver). This message can be sent in a simple way as follows.

While holding the Function Button ❶, push the C4 Key.

While the Function Button is held down, the Display shows  , showing that Tune Request message is being sent.

4 Appendix Table (1)

Standard Setting (=Setting obtained by Initialization)

MIDI Channel/Mode

MIDI Channel	1
OMNI	OFF
POLY/MONO	POLY

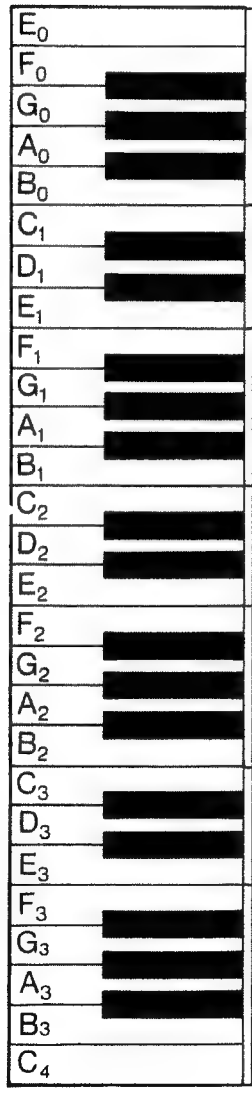
Functions of the Wheels and Buttons

	Function	Data Transmitted with MIDI
Modulation Wheel ❻	Modulation	Control Change 1
Master Volume Wheel ❼	Volume	Control Change 7
Modulation Button ❹	Modulation (Rise Time Fast)	Control Change 1
Octave Up Button ❽	Octave Up (Latch)	(Key numbers shifted)
Chord Memory Button ❾	Chord Memory (Latch)	ON/OFF of the recorded key numbers
Remote Switch Pedal ⓱	Hold (Untatch)	Control Change 64

Other Data in Memory

Function	Condition
Key Transpose	C_2 (No Transposition)
After Touch	Function 2 (Channel Pressure)
Touch Hold	OFF
Patch Chain	Not recorded
Chord Memory	Not recorded

Appendix Table (2) Key Assignment Table



Program Change					Key Transpose		MIDI Channel Function	Write Mode	
Block A	Block B	Block C	Block D	Block E	Display	Value (from C2)		Button (Pedal)	Wheel
11	41	71	21	51	E	−8	MIDI CH1	64 Hold	0
12	42	72	22	52	F	−7	MIDI CH2	65 Portamento	1 Modulation
Block A					F	−6	Initialization	66	2
13	43	73	23	53	G	−5	MIDI CH3	67	3
Block B					G	−4		68	4
14	44	74	24	54	A	−3	MIDI CH4	69	5 Portamento Time
Block C					A	−2		70	6
15	45	75	25	55	b	−1	MIDI CH5	71	7 Volume
16	46	76	26	56	C	−12	MIDI CH6	72	8
Block D					C	−11		73	9
17	47	77	27	57	d	−10	MIDI CH7	74	10
Block E					d	−9		75	11
18	48	78	28	58	E	−8	MIDI CH8	76	12
21	51	81	31	61	F	−7	MIDI CH9	77	13
Block A					F	−6		78	14
22	52	82	32	62	G	−5	MIDI CH10	79	15
Block B					G	−4		80	16
23	53	83	33	63	A	−3	MIDI CH11	81	17
Block C					A	−2		82	18
24	54	84	34	64	b	−1	MIDI CH12	83	19
25	55	85	35	65	C	0	MIDI CH13	84	20
Block D					C	+1	Write Mode Set/Reset	85	21
26	56	86	36	66	d	+2	MIDI CH14	86	22
Block E					d	+3	Write Mode Set/Reset	87	23
27	57	87	37	67	E	+4	MIDI CH15	88	24
28	58	88	38	68	F	+5	MIDI CH16	89	25
Block A					F	+6		90	26
31	61	11	41	71	G	+7		91	27
Block B					G	+8	Chord Memory Write Mode	92	28
32	62	12	42	72	A	+9		93	29
Block C					A	+10	Chord Memory Write Mode	94	30
33	63	13	43	73	b	+11		95	31
34	64	14	44	74	C	+12		Modulation (Rise Time Fast)	
Block D					C	+13	Display OMNI ON/OFF	Latch	
35	65	15	45	75	d	+14	Change OMNI ON/OFF	Modulation (Rise Time Slow)	
Block E					d	+15	Display Poly/Mono		
36	66	16	46	76	E	+16	Change Poly/Mono	Octave Down	
37	67	17	47	77	F	+17		Octave Up	
Block A					F	+18	Display Touch Hold	Patch Chain Decrement	
38	68	18	48	78	G	+19	Change Touch Hold	Chord Memory	
Block B					G	+20	Display After Touch	Patch Chain Increment	
–	–	–	–	–	A	+21	Change After Touch	Program Increment	
Block C					A	+22		Patch Chain End	
–	–	–	–	–	b	+23		Program Decrement	
–	–	–	–	–	C	+24	Tune Request	Patch Chain	

5 Specifications

AXIS-1 • MIDI Keyboard

‹Control Unit›

- **Keyboard** 45 keys, 3⅔ Octaves
- **Buttons** MIDI Channel/Function Button
  Key Transpose Button
  Program Change Button
  Chord Memory Button (Flexible)
  Octave Up Button (Flexible)
  Modulation Button (Flexible)
- **Wheels** Master Volume Wheel (Flexible)
  Modulation Wheel (Flexible)
  Pitch Bender
- **Display** Display Window (2 figures)
  Octave Up Indicator
  Chord Memory Indicator
  Hold Indicator
- **Output**
  Cable Connector
- **Dimensions**
  1075 (W) × 220 (D) × 63 (H) mm/
  42⅝" × 8 1/16" × 2½"
- **Weight** 3.5 kg/7lb 11 oz

‹Power Supply Unit›

- **Pedal**
  Remote Switch Pedal (Hold Pedal, Flexible)
- **Display**
  MIDI OUT Indicator
  Power Indicator
- **Rear Panel**
  Cable Connector
  MIDI OUT Connector (5P-DIN)
  Power Switch
- **Consumption**
  6W
- **Dimensions**
  211 (W) × 141 (D) × 61 (H) mm/
  8 5/16" × 5 9/16" × 2⅜"
- **Weight** 1 kg/2lb 3oz
- **Accessories**
  Cable (8m) × 1
  MIDI Cable (5m) × 1

Options

Carrying Case	SC-1
MIDI/SYNC Cable	MSC-25/50

MIDI Keyboard

MODEL AXIS-1 MIDI Implementation Chart

Function.....		Transmitted 1 2 3	Recognized	Remarks
Basic	Default	1 – 16	×	Memorized
Channel	Changed	1 – 16	×	
Mode	Default	1 – 4	×	Memorized
	Messages	OMNI on off, POLY MONO	×	
	Altered	**********	×	
Note Number		0 – 127	×	
	True voice	**********	×	
Velocity	Note ON	○ 9n, v=1–127	×	
	Note OFF	× 9n, v=0	×	
After Touch	Key's	× × ×	×	
	Ch's	× ○ ×	×	
Pitch Bender		○ ○ ○	×	
Control Change	1– 31	○ ○ ○	×	
	32– 63	× × ×	×	
	64– 95	○ ○ ○	×	
	96–121	× × ×	×	
Prog Change		○ ○ ○	×	0 – 119
	True #	**********	×	
System Exclusive		× × ○	×	$F0, 43, F7 for old MIDI
System Common	Song Pos	× × ×	×	
	Song Sel	× × ×	×	
	Tune	○ ○ ○	×	
System Real Time	Clock	× × ×	×	
	Commands	× × ×	×	
Aux Mes-sages	Local ON OFF	× × ×	×	
	All Notes OFF	○ ○ ○	×	
	Active Sense	○ ○ ×	×	
	Reset	× × ×	×	
Notes		Function : After Touch Function On power-up : Transmit memorized mode to memorized ch.		

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO ○ : Yes

Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO × : No

MIDI Keyboard

MODEL AXIS-1 MIDI Implementation

1. TRANSMITTED DATA

Status	Second	Third	Description	
1001 nnnn	0kkk kkkk	0000 0000	Note OFF	*1
1001 nnnn	0kkk kkkk	0vvv vvvv	Note ON	*1
1011 nnnn	0ccc cccc	0vvv vvvv	Control Change	*2
1011 nnnn	0111 1011	0000 0000	ALL NOTE OFF	
1011 nnnn	0111 1100	0000 0000	OMNI OFF	
1011 nnnn	0111 1101	0000 0000	OMNI ON	
1011 nnnn	0111 1110	0000 0001	MONO ON	
1011 nnnn	0111 1111	0000 0000	POLY ON	
1100 nnnn	0ppp pppp		Program Change	*3
1110 nnnn	0vvv vvvv	0vvv vvvv	Pitch Bender Change	
1111 0110			Tune Request	
1101 nnnn	0vvv vvvv		Channel Pressure	*4
1011 nnnn	0000 0001	0vvv vvvv		*5
1011 nnnn	0000 0011	0vvv vvvv		*6
1111 0000	0100 0011		Exclusive Message	*7
	1111 0111 (EOX)		(Active Sensing)	
1111 1110			Active Sensing	*8

Notes : *1 kkkkkkk = 0 through 127
*2 ccccccc = 0 through 31
vvvvvvv = 0 through 127
ccccccc = 64 through 95
vvvvvvv = 0 or 127
0 : OFF
127 : ON
*3 ppppppp = 0 through 119
*4,*5,*6,*7,*8
Data format of "After Touch(*4,*5,*6)" and "Active Sensing(*7,*8)" are chosen by "After Touch Function".

After Touch Function	After Touch	Active Sensing
1	*5	*8
2	*4	*8
3	*6	*7

Roland®

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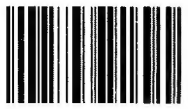
UPC 17049587



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